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A Collection of American Implements

By WILLIAM B. SPRAGUE

[AUTHOR'S NOTE — The publication of the following article in *Old Time New England* in July, 1933, contributed in such large measure to the birth of our Association that, in response to many suggestions and requests, it is hereby reprinted by the kind permission of the Society for the Preservation of New England Antiquities. The collection is located near Litchfield, Conn., and will be gladly shown by the owner to any member of this Association by previous appointment. Address him at 43 Cedar Street, New York, N. Y.]

The collecting of industrial implements is by no means a novel enterprise. For at least a quarter of a century the historical societies of various communities, more especially in Pennsylvania, have recognized the indisputable fact that the preservation and exhibition of these homely articles is important from the historical and educational standpoint. Probably due, however, to the efforts of several large museums, recently established in some of the leading cities, to secure representative showings of this class of material, there seems to be just now a general awakening of interest in early American industry, in the home and shop and on the farm, to the extent that the editor of *Old-Time New England* has expressed the belief that a description of a private collection of this character, however far from comprehensive, will be of interest to his readers.

As the late Dr. Henry C. Mercer, author of *Ancient Carpenters' Tools*, and founder of the great industrial museum at Doylestown, Penna., used to point out, if our learned archaeologists, who industriously explore the ruins of the eastern hemisphere, would give but passing attention to the prefactory tools of this country, they would readily find the solution to many problems which cause them sleepless nights and precipitate them into bitter controversies. For example, a dispatch from Jugoslavia, appearing in the *New York Sun* of May 13, 1931, stated that a recent discovery of Roman ruins revealed several reaping sickles, which, in common with other Roman sickles found in that region, "are all made to be used with the left hand," and proceeds to the deduction that the district must have formerly been populated by a "tribe of left-handed persons." Obviously, the savant who drew this conclusion was misled by the fact that the bevels of the blades were uppermost, when the sickles were held in the left hand, whereas every early American grain sickle was constructed in exactly the same fashion, but was swung in the right hand, bevel underneath.

The "museum" consists of a hay barn, about fifty feet long by twenty wide, early enough to be constructed with hand-hewn timbers, its well-mellowed siding making an attractive and appropriate background for the exhibits. In the main room, occupying

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Our Purpose

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men and other workers.

Dues

The annual dues are one dollar, payable September first, for the year immediately ensuing. *The Chronicle* for the current year is sent to all members without additional charge. Back numbers may be secured from the Treasurer for 20c each. For further information, address any of the officers. See page 5.

A Man of Iron

By LAWRENCE B. ROMAINE

In the town of "Middleborough," Mass., during the month of September, 1789, a certain blacksmith shoed horses, made and repaired wagons, wrought nails, hinges, latches and locks, forged sleigh runners, farming implements, tongs, shovels and curling irons, turned out cranes, spikes, cake turners, skewers, bull rings and forks and, last but not least, mended a baby carriage. When one stops to think of the number of trades required today to take care of this one man's work in a similar territory, it must be admitted that the stories, songs and poems of the mighty smith are not mere flights of the author's imagination. Most of these contributions to literature, however, pay tribute to his mighty arm. It is my purpose to praise his versatility and his appreciation of beauty. Such a subject would require many, many more hours of research than I have to give, to do it justice. I shall only attempt to scribble a few lines and show a few specimens. I hope, at some later date, to collect facts and take pictures of my collection that will really "put a feather" in the old gentleman's cap.

The cut shows several items, all of which were wrought on the anvil. At the left, top and bottom, are the delicate butterfly hinges; top right, the smoke house bar; top center, the drop knocker latch handle; center, the leaf-tipped, tree-tooled latch bar; center right, the lock escutcheon and heart-motif latch handle; lower center, the old cylinder padlock; bottom, the plate latch; and bottom right, the old curled ox yoke key or pin. At the time these objects were forged, I do not believe there was any architect standing by with designs. Some smith conceived the idea of the butterfly wings, and another decided to make the tip of the latch bar match the

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The Chronicle

Implement Collection

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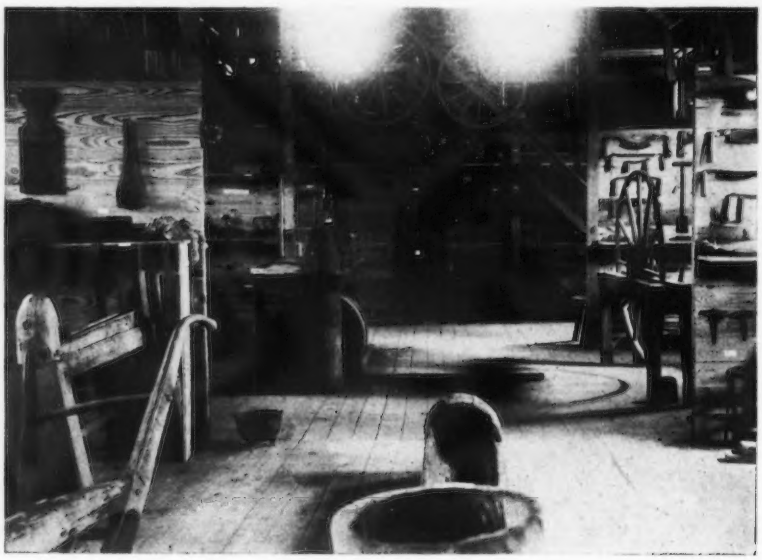
about three-quarters of the area of the building, thin board partitions, three on each side, project at right angles from the long walls to about one-third of the width of the room, leaving sufficient space in the centre for passage and for the placing of articles too bulky to be accommodated in the alcoves. These partitions serve the double purpose of separating unrelated groups from one another and of substantially increasing the wall space on which to hang the smaller things. The remainder of the ground floor, originally the cow stable, is walled off from the large room and is partitioned in half, one part being used for the handling of new acquisitions and storing of duplicates, and the other part, through which one enters the building, serving as a small display room. Here is shown the equipment of the sportsman—powder-horns, bullet-making implements, shot pouches, an ancient fowling piece, decoys, traps, an outfit, almost complete, for snaring the passenger pigeon (extinct for fifty years), fishing tackle, spears and torches.



GENERAL VIEW OF "MUSEUM"

Included in this group is the one "non-American" item in the collection, in the shape of a Spanish powder-horn, elaborately carved and dated "Ano 1658," the condition of the horn convincingly testifying to its age, and found by the writer in an abandoned house on Long Island. Who brought this to America? The Spaniards' military activities never extended to that part of the continent. Was it a Dutch immigrant who took it from a Spanish soldier during an invasion of the Low Countries, or an English privateersman who looted it from a Spanish galleon, or — perish the thought — merely an American tourist who bought it in Spain as a curio?

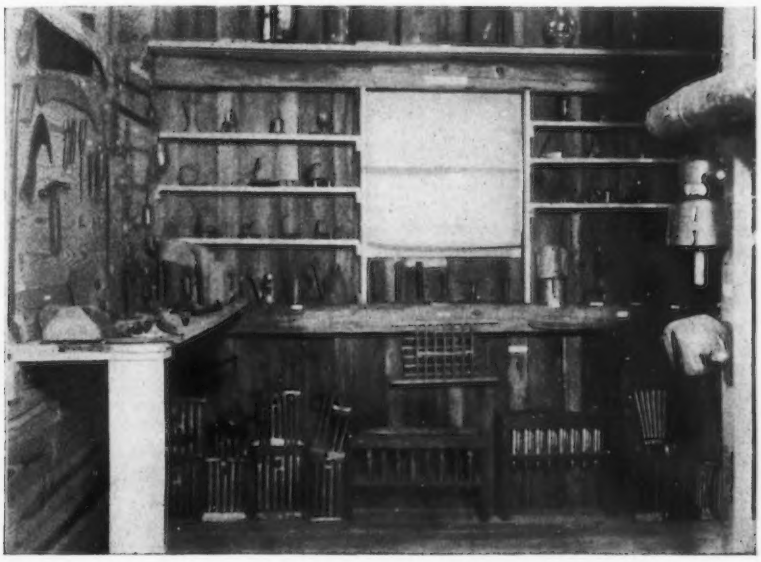
Closely related, in the realm of outdoor pastimes, and placed nearby, are the sleds, snowshoes and skates. On the opposite side of this small room are shown the instruments of the doctor and the dentist, including the crude blacksmith-made surgical instruments, bleeding knives and cups, and the vicious "turn-keys" for tooth extraction. Nearby is a group of toilet articles, featuring a primitive shaving kit, curling tongs, bootjacks and the like, equipment for inclement weather, such as umbrellas, ice creepers, a pair of pattens — apparently a relic of the eighteenth century — and miscellaneous articles pertaining to indoor amusements and education, hand-made toys and games, slates and ancient schoolbooks. Also in this room are displayed devices for measuring weight, distance, volume, time, etc. (except those which are designed especially for some particular industry and which are included with the tools of that industry) — a puzzling item here being a steelyard laid off in units of seven (one-half a stone weight).

Passing into the main room, the first group encountered are the tools for lumbering (felling and shaping wood for building material) including the complete equipment of the shingle maker, frows, frow clubs, shaving horse, and draw knives. Among the axes the most conspicuous are the Pennsylvania "goose-wing" type, truly of mediaeval appearance. Perhaps the rarest tool in this division is the hand forged, two-man "pit saw" or "whip saw," worked by the "tiller man" on a scaffold above and the "pitman" in a pit below, to saw balks of timber into boards, prior to the advent of saw mills.

The next section, that of the woodworker (the carpenter, wheelwright, turner and others) contains over two hundred items and naturally cannot be described in detail here. The massive mandrel lathe, with its solid wooden flywheel fully twelve inches thick, runs smoothly with the slightest pressure on the pedal. There are boring and reaming tools in large variety, including bit-stocks made entirely without metal, and the pump drill and bow drill, twirled by the winding and unwinding of a thong, suggestive of savage fire-making implements, draw knives with peculiar and engaging curves to their blades, hatchets for hewing, lathing and shingling, hammers and mallets (including one with head of beech and handle of oak, which defies explanation as to how the two were joined) and tools for sharpening, clamping and measuring, especially an iron square, fashioned, dated and "signed" by one I. Titus in 1809. Brother Titus evidently took great pains with this job, but was confused about his figures "4" and faced them all to the right instead of to the left! The coopers' tools, most of which are highly specialized in character and mysterious in appearance to the uninitiated, are given a corner of their own, together with a few barrels, buckets, tubs and even wooden canteens, for everything that is constructed of staves and hoops is the product of this artisan.

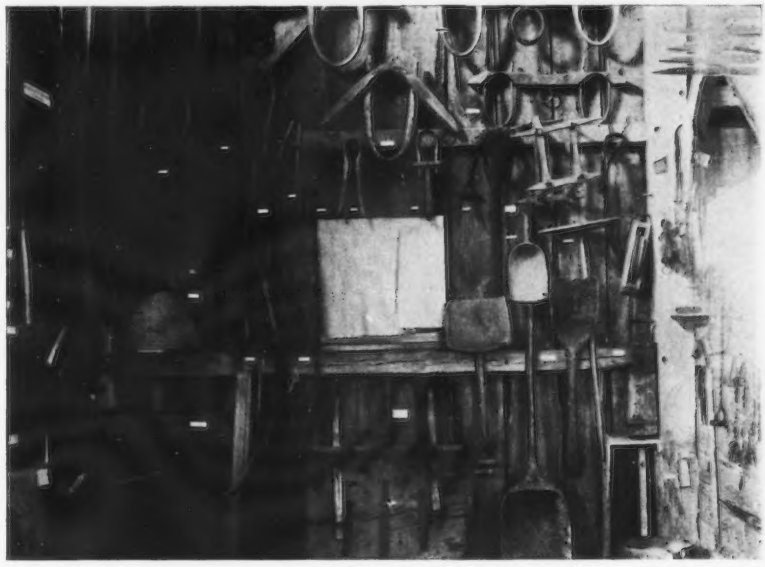
Leather working occupies the next compartment. A few tools for gathering tanbark and for tanning, currying and staking (i.e., stretching and softening) leather are shown, but this section is far from completion and by no means tells a comprehensive story. The shoemaker's bench, lasts and patterns, well-worn leather apron and various tools, principally handmade, as well as a few pairs of old-fashioned footgear, brass-tipped and otherwise, are grouped closely with the harness maker's bench and vise — the latter's tools, with few exceptions, being similar to those of the shoemaker. The glover's implements range from the hundred-year-

old method of marking out the parts from wooden patterns and shaping them with shears, down to the later nineteenth-century process, now superseded by machinery, of cutting the leather on a peculiarly constructed wooden block, with heavy steel dies, struck with a ponderous burl mallet of unique type.



LIGHTING DEVICES AND CANDLE MOULDS

A good sized compartment across the end of the room has been devoted to husbandry — the rearing of crops and live stock, tending them and making them useful. On the agricultural side, among the larger pieces, are plows with wooden mould boards (obsolete before 1830, and one of them many decades earlier than that), a "flop-over" horserake, of mid-nineteenth-century vintage, a grain-binder's wheel-rake, probably of 1830 to 1840, suggestive of a trunk cart but with iron-shod tines projecting in front to scoop up the cut grain, an ancient horse-drawn cultivator with hand-forged teeth, a number of corn-shelling machines, including the very early type consisting of a hollowed-out tree trunk with wooden rods passed through to form a grating, "dug-out" mortars and pestles for pulverizing grain, huge winnowing trays of wood and of basketwork for tossing threshed grain into a current of air to blow away the chaff, and their successor for the same purpose, the fanning mill, enclosing a paddle wheel turned with a crank, invented about 1800 and factory-made up to modern times. Among the less bulky objects are reaping cradles, scythes and sickles, including the extraordinary Pennsylvania-German scythe, which the user kept fit by tapping out the nicks on a pocket anvil, clumsy shovels, spading forks, hoes, mattocks, and grub hooks, seeding devices, including a complicated and ingenious machine, entirely home-made, which runs on wheels and automatically drops the seed at regular intervals, and harvesting forks, some of them made by splitting the end of a hickory or ash pole into three parts and then, by means of wedges, splaying out the split ends into a graceful trident.



FARM IMPLEMENTS

On the live stock side, the walls are well filled with draught yokes of various types, including the unusual single yoke, and with various "pokes" and other devices of wood and iron to be worn by unruly domestic beasts and fowls of all kinds. This section also includes tools and machines for handling bedding and fodder, the crude instruments of the old-time veterinary, implements to be used in and about vehicles, including a massive wagon jack, clearly dated 1786 by the blacksmith who made it, and tools used in the construction of fences, for without live stock no need for the farm fence is apparent.

The next department is that of metal working, of which the blacksmith occupies more than his share of the space, with his gigantic bellows, hammers, wrenches, threading tools, hoof-parers, files, nail-heading devices, and tongs of various sizes and shapes. It is difficult to date these tools, even approximately, as the blacksmith has always made much of his equipment in his own shop, and crudeness of construction and design is here even less reliable an index of age than usual. Only a few tools each for the tinsmith, coppersmith and pewterer have been secured, perhaps the most interesting being a brass mould for casting pewter buttons, immeasurably scarcer than the not uncommon "rat-tail" spoon mould. (*Continued in next issue*)

Powder horns were not used exclusively for loading fire-arms. Miners and quarrymen also carried them for blasting purposes.

A Man of Iron

(*Continued from page* 1, *column* 3)

finial of the latch handle instead of leaving it in the usual round shovel form. No one but the smith thought of putting roosters on the escutcheon and cutting hearts in the latch plates. The drop handle, acting both as a knocker and a latch to lift the bar, had been used for centuries before this country was discovered. However, my guess is that it was a blacksmith who devised it.

The outside smoke-house must have been a problem, with its precious contents. No ordinary latch could keep it safely locked, and locks were expensive. One of our blacksmiths decided to draw his iron into a loop that would fit over a staple, as well as the striker for the latch, and allow a padlock to snap in place and keep the neighbors out. The latch handle is not in perfect condition. I found it on the door

BLACKSMITH'S WORK

of a chicken house in Bucks County, Pa. It was originally on the front door of the old stone home. Some may feel that, in such artistic cases, the builder of the house went to the smith and asked for a certain design. I think, however, that usually the new home owner asked for so many outdoor latches and hinges, and so many indoor pieces of hardware, and expected the smith to do his best. In this case he certainly outdid himself. The box lock for which the escutcheon was made measured seven by thirteen inches. It was made in New Jersey. The rooster detail is excellent and, even if someone else thought of the idea, let's see you find a smith today who can make one!

The cylinder padlock is a curious thing and I do not credit a smith with the invention; I only show it as an example of his workmanship. The key in the end turns in the cylinder in a groove, drawing out or forcing down the pin that releases or catches the arm of the lock. The large plate latch is a nice bit of designing and artistically fashioned, with small "V" cuts around the edge. The spring, working on the latch bar, is well done. A spindle, with two brass drop handles, fits in the cam and works the lock.

What I have written does not scratch the surface of the topic. I hope it may serve to make those who read it realize that the old blacksmith had more than a strong right arm. I do not mean that every blacksmith could turn out such pieces. Far from it. Some of my collection could hardly be called artistic even by such "iron-minded" fools as myself.

This calls to mind two "jobs." One hangs over my mantel on the center panel, and the other is out in my workshop, hidden away in a drawer. The piece I prize is a cake turner. It is very delicately wrought, in the shape of the spade on playing cards, except for the handle which is more drawn out and ended in a rounded finial with a hole in it. On the spade is cut the initials "J. L.," and between them a club. At the tip of the spade is a heart, and on the handle a diamond. Whether the smith made it for his sweetheart, who was fond of playing whist, or whether he made it under instructions from "J. L." himself, is a matter for conjecture. The fact remains that it is a real piece of workmanship. The other "job" is a latch handle. It is nothing but an iron bar pulled out, drawn down at the ends, hammered once or twice, and two holes cut in it for the nails. It probably made a good stout handle! On the other hand, we should not blame the smith, I suppose, because his client may have said that he wanted a good strong handle for a nickel!

I have many pieces on which the smith has tooled his name, his initials and the date of manufacture. Once in a while, there are two sets of initials on a piece which I take to be those of the smith and of the man for whom he was working. One saw-tooth trammel that I have bears the date and one set of initials at the top, and at the bottom is another set of initials, with a star after it. I have one entirely hand wrought wafer iron. On the plates, where the cakes were to cook, are tooled the date, the bride's and groom's initials, the flaming hearts, and several sanctifying crosses. This piece is of "Pennsylvania-Dutch" origin.

It is hard to find a good smith today. Even some of the old-timers, so called, cannot do the work their predecessors could. When one realizes how indispensable these men were to every community, one knows just how much praise their work deserves. Let's appreciate it!

A Centre-bit Auger

It is seldom, indeed, that anything turns up to supplement the wealth of information contained in the classic *Ancient Carpenters' Tools*, by Henry C. Mercer. However, Dr. Mercer says of the center-bit (page 195): "Nevertheless, the tool with its open sides and half-open bottom is less adapted than the nose bit or even the spoon or duck's bill bit to pull out shavings from a clogged hole, hence is not convenient for deep excavation, and it is probably for this reason that the writer, in many searchings, has always found it as here shown, in the form of a comparatively small instrument, with a tapering rectangular plug-tang adapted for insertion in a carpenter's brace, and never mounted on a cross-bar handle like an auger."

A perfect example of this tool which eluded Dr. Mercer has re-

cently turned up in the collection of one of our members and is here illustrated by a careful drawing, which brings out the detail more clearly than a photograph would. The handle is 15 inches, and the bit 11 inches, long. It has been pronounced authentic in every way by all who have seen it. Strangely enough, it was found within the area which Dr. Mercer combed so diligently.

Early American Industries Association

Early American Industries Association

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W. B. SPRAGUE, *Editor.*

Annual Meeting

The annual meeting of the Association will be held at the Hawthorne Hotel, Salem, Mass., at 9 a.m., on Saturday, September 7. The hotel has agreed to provide, without charge, a room suitable for the meeting; and it is hoped that our out-of-town members will make it their headquarters. It is enthusiastically recommended by Salemites as a most comfortable place to stay, and rates are moderate,—single rooms ranging from $2 to $3.50, and double rooms from $3.50 to $6.00 per day, European plan.

A committee on local arrangements has been formed, consisting of Mr. Willis H. Ropes, Colonel Lawrence W. Jenkins, Mr. Howard Corning, Dr. William A. Strangman, Dr. Edward A. Rushford, and Mr. L. L. Thwing, and it is quite certain that, with these competent gentlemen in charge, the members who attend will be given full opportunity to see Salem and all its historical landmarks, which are said to surpass those of any other New England city.

The town was founded in 1626. Among its interesting features are the Town House Square, site of the Town House where the first provincial congress met, and the spot where John Endecott cut the cross from the English flag, and where Hawthorne's town pump stood; the City Hall, containing the Indian deed to the town, and distinguished portraits; the Court House, where the Witch Pins are kept, with documents connected with the Witchcraft Delusion (although, as Mr. Ropes points out, "Salem should be remembered, not as the place where they hanged nineteen innocent people, but as the place where that belief of ages was done away with and the spell broken"); the Peirce-Nichols House, one of Samuel McIntire's best; the Old North Bridge, scene of the first armed resistance by the Colonies in the Revolution; the Grimshawe House, of Hawthorne's "Dr. Grimshawe's Secret"; Hamilton Hall, interior finish by McIntire; Hawthorne's Birthplace (not open to the public); Charter Street Burying Ground, containing the tombs of Governor Bradstreet and Mayflower passengers, the oldest stone extant bearing the date 1673; Richard Derby House, the oldest brick house in Salem; The Assembly House, by McIntire, where Washington and Lafayette were entertained; Mall Street House, where Hawthorne wrote "The Scarlet Letter"; Chestnut Street houses, showing many beautiful specimens of early 19th Century doorways; the Pickering Mansion, built in 1651, and occupied since that time by nine generations of the same family; the Ropes Memorial, built in 1719, a typical mansion of the well-to-do Salem merchant, very fine furniture, Canton and glass ware, beautiful botanical gardens in the rear; Gallows Hill, at the foot of which people convicted of witchcraft were hanged in 1692; the John Ward House, built in 1684; the Narbonne House, built before 1671, with overhang; and the House of the Seven Gables, made famous by Hawthorne, and now used as a Community Settlement.

In addition to all of these, however, there are very especial attractions to the members of our Association.

The Peabody Museum specializes in marine relics, and possesses an outstanding and well-arranged collection of whaling implements, besides many other tools and utensils of all nations.

The far-seeing Essex Institute has, for many years, been accumulating American tools and implements of the by-gone era, and proposes to arrange a special display for this occasion.

Not entirely by coincidence, our meeting is on the first day that the Salem Chamber of Commerce will conduct, at the Pioneer Village, its second annual exhibit of early industries, which was so successfully produced last year. There will be at least twenty different industries represented, including Lighting, Sanitation, Canning, Hardware, Fish-curing, Preparing Oil, Salt-making, Soap-making, Laundry, Human Sight, Silver-making, Shoemaking, Dairy, and Herbs and Drugs.

The great majority of our members, being much interested in lighting devices, will unquestionably avail themselves of Dr. Rushford's very kind invitation to examine his collection, consisting of about fifteen hundred specimens.

Obviously, all this is more than "a day's work," and those who can do so should certainly allow themselves two or three days' time in which to do their sight-seeing, as well as to form and develop acquaintances with other members. It is hoped that many will bring with them duplicates that they wish to dispose of, and if a sufficient amount of such material is on hand, an effort will be made to arrange a barter-and-sale session, and possibly an auction. All the gatherings of the society, except the business session on Saturday morning, will be of an entirely informal nature, and the wives, husbands, relatives, and friends of members will be made very welcome, especially if there seems to be a possibility of adding them to our roster. A brief reminder of the meeting will be mailed about the middle of August, but members are urged to retain this article for reference as to details.

Chronicle No. 1

A sufficient number of orders for the reproduction of our first issue were received to cover the cost of using the same quality of paper. In fact, the reproduction appears to be indistinguishable from the original, except for an inconspicuous legend which was placed at the foot of the last page to satisfy those who felt that their originals had a "first edition" standing. A copy has been mailed to everyone who ordered it. The treasurer still has on hand about thirty-five complete sets of last year's series,— Numbers 1 to 6 inclusive, including the reprint — at $1.20 per set, or 20 cents per single copy. All members presumably have already received this year's series,— Numbers 7 to 12 inclusive.

The Chronicle

Early Pencils

By G. A. R. Goyle

The old inventory of 1677 in the Essex County Probate Records, quoted in *Ancient Carpenters' Tools* by H. C. Mercer (Doylestown, Pa., 1929) as an early reference to lead pencils, listing "27 pensills at 8d. p. doz. — 1s. 6d." refers more likely to painting brushes. W. Salmon, in his *Polygraphice or the Arts of Drawing, Engraving, etc.*" (8th Edition, London, 1701), gives detailed information on "The Manual Instruments" for Drawing, Limning, &c. To him, pencils, as such, are always made "of hair, and are of several bignesses, From a Pin, to the Bigness of a Finger, and called by several Names, as Duck's quill fitch'd, and pointed; Goose quill fitch'd and pointed; Swan's quill fitch'd and pointed; Jewelling Pencils; Brush Pencils; some in quills; some in Tin Cases and some in Sticks." W. Salmon was acquainted also with lead pencils and distinguishes "Black and Red Lead Pencils." No details are given beyond the statement that "They are made either of black or red Lead, shaved to a sharp point." Of compasses he says: "They are a brass Instrument, made commonly with Steel points, to take in and out; that Ink, black or red Lead, may be used at pleasure."

The word pencil, to denote a brush, has persisted until the early part of the 19th century. In *The Book of Trades* (London, 1824), among the implements of the painter, it is said that "The Pencils or Brushes are made of Camel's Hair, Badger's Hair, or Hog's Bristles." The word pencil is derived from the Latin *Penicillus* — a paint brush, the same as the German word *Pinsel* which, in Germany, is the word for paint brush to this day, and has never been used metonymically for a lead-pencil, as has the English equivalent.

The dictionary accounts of the early history of lead pencils need a revision, and we have to go back for better information to the works of Conrad Gessner, who gives the first account of plumbago in his *De omni rerum fossilium genere, gemmis, lapidibus, metallis &c.*" (Zurich, 1555). In connection with this mineral, Gessner describes the wood-encased lead pencil, and illustrates it with a woodcut. A more detailed description of plumbago appears in *Caesalpini De Metallicis Libri* (Rome, 1596). There it is called a lead-colored, shiny and slippery stone, as if covered with oil, from which sharply pointed pencils are made for the use of artists. Another Italian writer, Ferrand Imperato, calls this mineral *grafio piombino* in his *Natural History* (Naples, 1599), and remarks that it is preferable, for drawing, to pen and ink, being visible on black as well as on white ground, that it can be left standing or wiped off *ad libitum*, and that it is possible to write or trace over such lines with a pen. Gessner's woodcut of a lead pencil is reproduced on a larger scale in Aldrovandi's *Museum Metallicum* (Bologna, 1648). These data should suffice to refute the current notion that lead pencils were first made, in 1664, of graphite from the Borrowdale mines in England. In fact, the account Robinson gives, in his *Natural History of Westmoreland and Cumberland* (London, 1709), of plumbago mined near Keswik, does not mention its use for lead pencils, but shows that it was mostly exported to Holland, where it was used for dyeing, as the crafty Dutch traders told the unsuspecting producers, and we may deduce from this that, at the Borrowdale mines, nobody knew then that they were furnishing to the Dutch the very quintessence and marrow of the lead pencils. In the curious book called *Fleta Minor, the Laws of Art and Nature* by J. Pettus (1683), under the heading "Lead," mention is made of lead-pencils set into fir or cedar wood. The title of this work, *Fleta Minor*, is remindful of the anonymous Latin book of English Law written about 1290, probably in the Fleet Prison.

To complicate matters, the *New International Encyclopedia* (New York, 1926) asserts that "the manufacture of graphite pencils in England began in 1564, when a valuable graphite mine was discovered at Borrowdale, Cumberland." This must be a misprint as the usual date assigned to this event is 1664. Of more national interest is a note from the same source: "The first manufacturer of black lead pencils in the United States was William Monroe, of Concord, Mass., who, in 1812, invented a process by which he pulverized and mixed the material and incased it in cedar holders. He was very successful in selling his product and continued the business for about eighteen months, when he was obliged to give it up, on account of the difficulty of obtaining the raw materials. Later he resumed the manufacture of pencils, and continued it on a small scale for many years."

In German, the equivalent of the scratch-awl, is *Reiss-ahle*. *Reissen*, in this sense, means making lines. *Reissblei*, although now colloquially understood to mean graphite, was a square stick of lead, used by the carpenters for making lines on wood. The English equivalent is plummet. The *Universal Cyclopedia* (New York, 1905) has the following about it: "Even as late as the 19th century, pencils made of soft lead hammered into convenient forms were used and known as plummets." A definition in the *New Standard Dictionary* (New York, 1919) confirms it by calling a plummet "a pencil of solid metallic lead, as distinguished from a graphite pencil, now little used."

Another source of information about the early use of lead pencils may be the study of old drawings and manuscripts. In the Catalogue of Original Drawings by Old and Modern Masters from the R. Ederheimer Collection, The Anderson Galleries (New York, 1919), a modern critical sales catalogue of old drawings, I saw listed a few pencil drawings, the oldest being by Lambert Zutman (Suabius) 1510-1567 A.D.

Finally, while concerned with the history of lead pencils, we should add a word about erasers. Salmon (*Polygraphice*, London, 1701) tells us that artists make their rough sketches ("schizzo" as he calls them) with charcoal of sallow-wood. Inaccuracies could be rubbed out with the feathers of a duck's wing, or with a bit of bread. Towards the end of the 18th century, India rubber came to be used for erasing pencil lines. It was then costly; a cube, with sides one-half inch long, sold for 3 shillings. Rough blotting paper or bits of bread preceded the use of the India rubber.

In conclusion it may be stated that the beginning of our modern lead pencils, with varying degrees of hardness, dates from the invention of Jacques Conté (French patent of 3rd January, 1795), who made a mixture of powdered graphite and clay, which could be pressed into thin uniform rods to be encased in wood. His process revolutionized the industry, and supplanted the wasteful process of cutting the rods from solid native graphite.

Robert Southey, in his book "The Doctor," written between 1834 and 1837, says: "Are there ten men in Cornwall who know that Medacritus was the name of the first man who carried tin from that part of the world?"

Early American Industries Association

New Members

Please check your name and address and advise Mr. Goodnow of any corrections. The total membership is now 539.

Horace W. Davis, *Pittsfield, Mass.*
Miss Helen E. Ellis, *New Bedford, Mass.*
Dr. Fritz Hommel, *Munich, Germany.*
Miss Rose Janse, *Newton Center, Mass.*
Mrs. Burgis D. Jennings, *Norwalk, Conn.*
Dr. Florence M. Kleine, *Pittsburgh, Pa.*
Paul H. Lyman, *Wauwatosa, Wis.*
Irving Mead, *Brooklyn, N. Y.*
Miss Louise Montgomery, *Cleveland, O.*
Carl Palmer, *Urbana, O.*
H. D. Paxon, *Philadelphia, Pa.*
W. G. Snow, *Meriden, Conn.*
Miss Cornelia Weston, *Elizabeth, N. J.*

It is strange, but true, that the summer months, when people are supposed to be most "antique-minded," is when the influx of new members dwindles to its lowest point.

Mast-Hoops

By Newton C. Brainard

In these days, when we are trying to resurrect the details of vanished industries, it is always of interest to find that we still have in operation some which everyone supposed had ceased long ago.

On a recent visit to Canterbury, Connecticut, we found that oak mast-hoops for sailing vessels were still being made there by two families, just as they have been for years past. Curiously enough, from this little village, far removed from any body of water larger than a mill pond, mast-hoops are still shipped to such distant parts of the country as Seattle and Galveston. Our visit took us to the mill of Mr. George Washington Smith. The factory, originally a woolen mill, was bought by Mr. Smith's father over seventy years ago, since when it has turned out various wood-working products. All the machinery used, from the undershot water-wheel below the mill to the band-saw in the upper floor, was constructed in the mill by Mr. Smith, and it is interesting to note that in these home-made machines are to be found the basic ideas which are used in modern wood-working machinery.

The mast-hoops are made from native oak logs, which are first split with wedges. The resulting sections are then rived with a frow into still smaller strips, which are then sawed approximately to size. With a man at each end of the strip, the saw is run down, following the grain as closely as possible, instead of making a straight cut against a guide. This avoids having any splinters from cross-grain sticking out, when the hoop is bent. After sawing, the strips are barked, and then reduced to even thickness in a rotary planer. Then the inside of the hoop is rounded on a machine much like a horizontal shaper. The next operation is beveling the scarph (scarf), which is done with a draw knife on a bench like a shingle horse. It was interesting to learn from Mr. Smith that the lap on a good hoop is equal to its diameter; a six-inch hoop has a six-inch lap. After a thorough steaming in a chest, the hoops are quickly withdrawn and bent into circular form on a vertical former, operating much like a modern pipe or wire bender. Before it is lifted from the center form, the ends are tacked together. Only the finishing operations are left, — boring, riveting, sanding the outside, and varnishing.

It is naturally a matter of great pride to Mr. Smith that he was chosen to furnish the mast-hoops used when the Constitution was re-rigged. These hoops, fourteen inches in diameter, were perhaps the largest he has ever made. A sideline, not active in these days, is the making of bows for ox yokes, and, for several years, a considerable business was done in "ice polo" or "shinny" sticks, which preceded the modern game of hockey.

Mr. Smith, who, with his son Fremont, operates the mill, was most courteous in showing the visitors all the details of the business, and was rightly proud of the ingenuity and skill with which he had designed and built the equipment for his needs. At one time, another son, now deceased, operated a wood-turning plant on the second floor. Samples of the work which are left show that his equipment too was designed with Yankee ingenuity. One piece shown was bored and then shaped on the outside to an irregular pattern, and finally cut off, all at one operation, very similar to the action of the modern screw machine.

According to tradition, "bees" were often held by housewives for apple-paring, as well as for sewing, quilting, and the like. The elaborate construction of some of the early home-made paring machines suggests that they were designed more with an eye to showing them off on these occasions, than for labor-saving purposes.

Museum Notes

Folk Craft is now valued for its inherent beauty of design. Artists have discovered that pottery, embroidered fabrics, wrought iron and many other objects made by village craftsmen, often masters in their lines, are rich in inspiration for original work, and students of art recognize folk arts as a significant aesthetic expression. The Museum of Folk Arts at Riverdale-on-Hudson, New York, is an outstanding contribution in this field. This Museum was founded by Mr. and Mrs. Elie Nadelman, who, for many years, have made available to students their wide collection of folk arts from all nations. Now, through a grant from the Carnegie Corporation of New York, this museum is open to the general public. Mrs. Nadelman is the director. The many collections displayed on the four floors of this museum, the only museum with an international scope, are of every type of handicraft of the past. Among the earliest pieces are figures from wayside shrines, carved in Gothic times by country craftsmen. An English slip ware bowl marked 1610 antedates any dated slip ware in the British Museum. Early American Folk Art is extensively represented and includes early portraits, landscapes and historical subjects, now known as American Primitives and sought by connoisseurs. Typically American are examples of glass, slip ware pottery and brown glazed Bennington Ware. From the early village of Manhattan Wells, now a part of the city of New York, came beautiful stone ware jugs ornamented with blue and bearing the name of C. Crolius. The American collection includes ensembles of furnishings, an early American pharmacy with shelves, counters, prescription books, bottles and jars, some still full of old herbs and drugs. The native product is less elaborate in its ornamentation and somewhat cruder in execution than its European prototypes, but it possesses the same beauty and charm inherent in folk art everywhere. The Museum of Folk Arts is open on Saturdays from 11 to 6, on Sundays from 3 to 6, and on other days to groups by appointment, Kingsbridge 6-3267.

Coffee and chocolate were first used in the American colonies about 1670, and tea about twenty years later. Oranges and lemons were first imported about 1832.

COMMUNICATIONS

From MR. EDWARD R. FOREMAN:

"In the possession of The Rochester Historical Society is the Moses anvil, brought to America in 1632, by John Moses of Plymouth, Massachusetts. This anvil, bearing a chiseled date of 1632 near the base, remained in the continuous possession of the Moses family for two hundred and seventy-five years. It was exhibited at the Centennial Exhibition in Philadelphia, 1876, in a building devoted to New England historical relics. On December 6, 1907, this anvil and hammer were given to The Rochester Historical Society by Fred A. Moses, son of Schuyler Moses, who was born in Canton, Hartford County, Conn., December 31, 1798, and died at Rochester, March 13, 1889, in his ninety-first year. I am writing to inquire whether you know of any anvil or implement of an earlier date in America. For authentication of this anvil, you are referred to *Historical Sketches of John Moses of Plymouth*, etc., by Zabrina Moses, Hartford, Conn. (press of Case, Lockwood and Brainard Company; together with Vol. II of said *Sketches*, by the same author and publisher, 1907). In Volume I, Chapter 1, of this Moses Genealogy, you will find a record as to the anvil, with a woodcut of same."

From MR. H. K. LANDIS (*referring to Chronicle No. 11*):

"And now for 'Museum Notes,' p. 7. We make a practice of buying account books and business papers, whenever they come up for sale. We do not pick and choose, but buy it all, even if the penmanship and spelling are illegible and there is neither year nor name of owner. Even if some day some searcher will lose his temper and talk to himself over these records, they are what they are, and that is that. These old records are source material, and require intelligent study in their use, but they are almost all we have left of those early days. From my own experience with them, the value of these old papers lies in dates, signatures, names of articles, and prices then prevailing.

Regarding your first article, we have a considerable collection of wooden ware and are continually adding to it. If the writer had lived in Lancaster County, she would have said considerable about the wooden ware, etc., turned by Joe Lehn, and beautifully decorated in colors. The "Pa. Dutch" artisans were expert with this wooden ware manufacture, and all sorts of turning, up to the cider-press screws, 12 feet long and 6 or 8 inches in diameter, or mixing bowls over 2 feet in diameter. Also with wood carving, as witness their butter prints, springerlies (or wallpaper printing blocks) and bag-marking blocks."

"POINTS" OF INTEREST

A new organization known as the "Doll Collectors Club of America" has recently been formed for the purpose of investigating and recording facts pertaining to the early American manufacture of dolls. To become a member, one must have already formed a sizable collection of dolls, and the membership is limited to fifty. Further information about the club may be obtained from Miss Amy Louise Wood, 56 Hammond Street, Clinton, Mass.

Cotton spinning was one of the prehistoric industries in India, as flax spinning was a neolithic culture in Europe and elsewhere. Although cotton was mentioned by Herodotus (*circa* 450 B.C.), it was practically unknown in Europe until the 15th century, when it was imported for lamp wicks, as it draws up the oil better, and does not char as much, as either flax or wool. Within the next hundred years, its use became fairly common for various fabrics, but it was another century before it was as cheap, or cheaper, than flax or wool which were raised locally.

According to *The Progress of Man and Society* by the Rev. Dr. Trusler, which the author modestly admits "is an epitome of all that is in the world," three materials were used for the "windows of lanthorns." "One is the horns of an animal softened by boiling water, and spread out thin; the second is glass, made by melting down flint stones; and the third, a substance called *talc*, which is dug out of the earth." (Does anyone have the date of this book? Our copy bears none.)

From a receipt book of 1832:

"It is said that a few leaves of elder, strewed on the floor of a room infested with cock-roaches, will extirpate those insects. House-flies may be effectually destroyed without the use of poison. Take half a spoonful of black pepper in powder, one tea-spoonful of brown sugar, and one table-spoonful of cream; mix them well together, and place them in a room on a plate, where the flies are troublesome, and they will soon disappear."

The Farmers', Mechanics' and Manufacturers' Magazine of 1826, Vol. I, page 229, describes an implement which has not previously come to our attention. It is a "wedge for sawyers" for keeping the kerf open, and "consists of a handle or center piece, and two lateral or spring pieces, all made of sound ash; these are inserted at one end into a wedge-shaped brass or iron cap, so that the side pieces, by their divergence when open, form a continuation of its sides. Nearly at the center of gravity of the wedge, an upright handle is fixed which being surmounted by a cross bar, supports the instrument in the saw kerf. . . It may be made of iron and steel."

"Pewter may be cleaned by leaving overnight in a dilute bath of potash and water, then buffed or polished. A good pewter polish is fine, wet beach sand. The first and best pewter polish available, wherever there is an open fire-place, is wood-ash applied with a damp cloth."— *Samuel Temple in The Rushlight.*